

CLAIMS

1. A speaker including:

a concave frame having an opening on the upper part thereof;

5 a diaphragm provided in the opening of the frame with outer periphery of the diaphragm being fixed to an edge of the opening of the frame through a first edge;

a voice coil provided on the bottom surface of the diaphragm;

a magnetic circuit wherein at least a part of the voice coil is movably disposed in a magnetic gap of the magnetic circuit; and

10 a suspension holder outer periphery thereof being fixed to the frame through a second edge on the bottom surface of the diaphragm inside the frame; wherein

the first and the second edges are substantially symmetrical with respect to a space between the first and the second edges, inner periphery of the suspension holder and inner periphery of the diaphragm are directly or indirectly fixed to the voice coil at a part outside of the magnetic gap, the magnetic circuit has a magnet provided outside of the bottom of the frame with the outer periphery of the magnet extending beyond the center of the second edge, and
15 the magnetic gap of the magnetic circuit is pushed into the frame past bottom surface of the frame.
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2. The speaker of claim 1 wherein the magnetic circuit includes:

25 a yoke having a columnar protrusion formed on a top surface of a plate member;

a ring-shaped magnet laminated on the yoke;

a ring-shaped plate outer periphery thereof being laminated on the magnet and inner periphery thereof being pushed into the frame together with the columnar protrusion of the yoke thereby

forming a magnetic gap between the inner periphery of the ring-shaped plate and the outer periphery of the columnar protrusion.

5 3. The speaker of claim 1 wherein the magnetic circuit includes:
 a yoke having a columnar protrusion formed on the top surface
 of a plate member;

 a plate-shaped top plate laminated on the columnar protrusion
 of the yoke;

10 a ring-shaped magnet laminated on the yoke;

 a ring-shaped plate outer periphery thereof being laminated
 on the magnet and inner periphery thereof being reaching inside of
 the frame together with the columnar protrusion of the yoke thereby
 forming a magnetic gap between the inner periphery of the
15 ring-shaped plate and the outer periphery of the top plate on the
 columnar protrusion.

 4. The speaker of claim 1 wherein a step section is formed on a
 lower part of a side surface of the frame for fixing the second edge
20 and an air vent is provided on a side surface portion lower than the
 step section.

 5. The speaker of claim 4 wherein a dust filter is provided in the
 air vent section.

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 6. The speaker of claim 5 wherein the dust filter is provided in
 the air vent section on an outside portion of the frame.

 7. The speaker of any one of claim 1 to claim 3 wherein the

magnetic circuit has the magnet provided outside of the bottom of the frame and outer periphery thereof being extending at least beyond the second edge.